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ABSTRACT

Background papers, developed by members of the Task Force to Study Programs Leading to Certification for Teachers in the Area of Social Studies, Illustrate the approach taken toward development of a new regulation for certification of social studies teachers in the state of Minnesota. These papers were prepared primarily as a means of identifying broad areas of teacher competencies to be included in the new certification regulation and in the guidelines to accompany that regulation. The competency model which is developed by the Task Force focuses on student outputs rather than teacher inputs to the learning process. In this document identification is made of desired goals in the cognitive domain for social studies education. Representative teacher competencies and behaviors useful for helping pupils progress toward these goals are listed. Related documents are SO 006 086-89. (SHM)

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BACKGROUND PAPER

SOCIAL STUDIES TEACHER COMPETENCIES: THE COGNITIVE AREA

Introduction

This paper was developed by members of the Task Force to Study Programs Leading to Certification for teachers in the Areas of Social Studies. It illustrates the approach taken by that Task Force as it worked to develop a new regulation for certification of social studies teachers in the State of Minnesota.

The Task Force has reversed the approach of many of those who have attempted to identify teacher competencies. Rather than beginning with teacher behaviors and knowledge needed to teach social studies, the Task Force began with the assumption that the major way of measuring a teacher's competency should be to assess the degree to which the teacher is able to help pupils make progress toward goals identified for a social studies program. In other words, the Task Force began with a competency model focused upon student outputs rather than with one based upon teacher inputs to the learning process. Such a model seems more appropriate in a day when the public is demanding greater accountability from schools.

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The Task Force began its work by identifying a list of social studies outcomes on which members felt there might be considerable agreement. These outcomes in the cognitive domain are listed in the left-hand column of the pages in this background paper. Along with the goals from other background papers, these cognitive goals have been abbreviated and appear in the appendix of the Position Paper. That that the Task Force believes that tea to help pupils progress toward social fied for any class.

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Introduction

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appendix of the Position Paper. That list makes it clear that the Task Force believes that teachers should be able to help pupils progress toward social studies goals identified for any class.

Task Force members then tried to identify those teacher behaviors in the classroom or in other teaching situations which would facilitate pupil learning of each outcome. These behaviors are found in column two, opposite the outcome which they should help achieve.

Column three shows another type of competency. Task Force members have tried to identify in this column those behaviors and competencies which make possible the teacher classroom behaviors identified in column two. They are placed opposite each of the behaviors which they should facilitate.

Several things should be noted about the behaviors found in columns two and three. First, many of those related to learning experiences and instructional materials are stated in very specific terms appropriate for a single skill. Obviously, no final list of competencies can include all of these skill-specific behaviors. However, it is easy to categorize them under some general headings, such as "Uses a multi-media program with instructional materials appropriate to goals" and "Uses learning experiences appropriate to the goal."

Second, many of the competencies and behaviors are repeated frequently within one column. This is to be expected,

since the same competency often facilitates the learning of many different cognitive goals. Once the background papers had been completed, it was possible for Task Force members to examine the behaviors in column two in this background paper as well as in the paper on the affective area and part one of the paper on community and professional relations. Behaviors which were found frequently in these papers have been grouped under general headings to form a condensed list of teacher classroom behaviors which facilitate the attainment of goals by pupils. This condensed list forms Part II of the longer condensed list of competencies found in Appendix B of the Position Paper on the regulation.

Similarly, overlap appears in column three of this background paper as well as in the other papers. Again, the competencies have been grouped and condensed into three major areas of knowledge and behavior. The condensed list in Appendix B of the Position Paper.

It is from the longer condensed list of competencies found in the position paper that the Task Force has derived the major areas of competency identified in the regulation. These areas correspond to the major headings in the condensed list.

This background paper and the others developed by the Task Force were prepared primarily as a means of identifying broad areas of competencies to be included in the new regulation on certification and in the guidelines to be followed by those developing new competency-based programs in the state. Consequently, the papers are not attached to the Position Paper prepared by the Task Force. However, much thought and effort have gone into the development of these papers. Some colleges may wish to use a similar model for developing their programs. If so, they should feel free to make what use they can of this and the other background papers. The Task Force wishes to emphasize, however, that neither the background papers nor the condensed list of competencies found in Appendix B of th constitute any required list of compet Minnesota colleges. Indeed, no instit develop so many competencies within fo Nor is this list of specific teacher c sive, long as it is. Each institution set of competencies under each broad a section three of the regulation. Howe to use any of the specific suggestions list of competencies or this backgroun is being made available only because s it helpful as they seek to develop the tencies and their own program for deve them.

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competencies found in Appendix B of the Position Paper constitute any required list of competencies to be adopted by Minnesota colleges. Indeed, no institution could hope to develop so many competencies within four or even five years. Nor is this list of specific teacher competencies comprehensive, long as it is. Each institution must develop its own set of competencies under each broad area identified under section three of the regulation. However, it is not required to use any of the specific suggestions found in the condensed list of competencies or this background paper. This paper is being made available only because some educators may find it helpful as they seek to develop their own list of competencies and their own program for developing and evaluating them.

COGNITIVE AREA

MAKES PROGRESS TOWARD ACHIEVING STUDENT OUTCOMES LISTED BELOW	REPRESENTATIVE TEACHER COMPETENCIES AND BEHAVIORS USEFUL FOR ACHIEVE OUTCOMES	
	BEHAVIORS IN CLASSROOM AND OTHER TEACHING SITUATIONS	COMPETENCIES WHICH W TEACHER CLASSROOM BE
General Goal Understands and applies important social science concepts, generalizations, and theories to new data and situations, as indicated by the following behaviors:	In General Teaches concepts, generalizations, and theories which are significant because of their usefulness to citizens, because of their importance in the social sciences, and because they are suited to the maturation level, abilities, and interests of pupils in the class. Focuses upon concepts and generalizations rather than upon the learning of discrete data. Uses a clearly-thought-out rationale to guide selection of goals.	In General Identifies, defines, apply key concepts i social sciences. Ca of concepts to teach logic of the social for structuring the sciences, general ci and knowledge about ability levels and t pupils in the class. Identifies major and theories in the soci Identifies and can a major generalization generally accepted b in the disciplines. theories and general enough to identify t and strengths. Develops a logically rationale for teachi in public schools. and generalizations during course, unit, of this rationale.

COGNITIVE AREA

REPRESENTATIVE TEACHER COMPETENCIES AND BEHAVIORS USEFUL FOR HELPING PUPILS ACHIEVE OUTCOMES

BEHAVIORS IN CLASSROOM AND OTHER TEACHING SITUATIONS	COMPETENCIES WHICH WOULD HELP ACHIEVE TEACHER CLASSROOM BEHAVIORS
In General Teaches concepts, generalizations, and theories which are significant because of their usefulness to citizens, because of their importance in the social sciences, and because they are suited to the maturation level, abilities, and interests of pupils in the class. Focuses upon concepts and generalizations rather than upon the learning of discrete data. Uses a clearly-thought-out rationale to guide selection of goals.	In General Identifies, defines, explains, and can apply key concepts in the different social sciences. Can defend selection of concepts to teach in terms of the logic of the social sciences, theories for structuring the different social sciences, general citizenship goals, and knowledge about the maturation and ability levels and the interests of pupils in the class. Identifies major and conflicting theories in the social sciences. Identifies and can apply some of the major generalizations which are generally accepted by practitioners in the disciplines. Comprehends theories and generalizations well enough to identify their limitations and strengths. Develops a logically-consistent rationale for teaching social studies in public schools. Identifies concepts and generalizations to be taught during course, unit, and lesson in terms of this rationale.

Locates, selects, and develops materials of instruction which provide the data needed for the development of the selected concepts and generalizations.

Develops lessons and unit plans which indicate clearly how these concepts and generalizations will be taught.

Diagnoses level of pupils' understanding of concepts and generalizations selected for study. Adjusts teaching to existing knowledge.

Can explain the importance of identifying existing knowledge related to concepts and generalizations, both in terms of the "entry" behavior (knowledge needed in order to successfully build the new concepts and generalizations) and because of the need to adjust plans if pupils already demonstrate adequate comprehension and ability to use these concepts and generalizations.

Develops diagnostic devices to identify the level of pupils' understanding of concepts and generalizations selected for study as well as those needed in order to teach these new concepts and generalizations.

Adjusts content, instructional materials, and learning experiences to the many types of individual differences in a class, including cognitive style; makes direct provision for meeting the needs of individual pupils, rather than just adjusting the level of teaching to meet the general ability level and maturation level of the class.

Identifies types of individual differerences which may be found among students. Can explain ways of working with pupils to take into account these differences.

Identifies types of diagnostic devices which can be used to identify level of cognitive learning and cognitive styles as well as other types of individual differences in interests, abilities, and belief systems. Interprets results of findings from administration of published diagnostic measures and his own diagnostic devices.

Locates and develops materials of instruction which can be used by students with different abilities, interests, learning styles, and personality characteristics.

Develops unit and lesson plans which provide ways of handling differences among a specific group of students.

Adjusts content, learning experiences, and instructional materials to the general characteristics of a class in terms of previous social studies courses and units studied, interaction patterns and leaders among class members, socio-economic and ethnic composition of the class, the "culture" of the class (norms and values, common ways of behaving, and common attitudes toward social studies), and the range and general ability level.

Identifies ways of determining previous social studies courses and units studied by pupils in a class. Can explain the importance of this information for teaching.

Can explain ways of identifying the interaction patterns among class members, including cliques, leaders, and those who may be rejected or ignored by others. Explains ways of using this knowledge to adjust teaching plans.

Can explain ways of identifying the "culture" of a class and ways of using this knowledge in the selection and guidance of learning experiences, the selection of materials, and the development of teaching plans.

Identifies some of the common characteristics of large groups of students arising from their membership in a cultural or socio-economic group. Explains the implications of such findings for plans and instructional materials.

Can explain the implications of data on the range and general ability level of pupils in a class for developing teaching plans.

Limits the number of difficult or new concepts and generalizations which are introduced within a brief period of time. Introduces a series of concepts and generalizations of narrower scope prior to teaching higher level concepts or broader generalizations which relate them.	Identifies concepts of different levels of difficulty and of different scope. (Explains criteria which can be used in identifying probable difficulty level of concepts for a particular group of students. Identifies concepts which are subsumed under others.) Identifies generalizations which are narrower in scope and which can be used to help pupils understand the broader generalization identified as one to be taught. Distinguishes between singular generalizations and transferable generalizations or inferences.
Uses teaching strategies and techniques which are adjusted to the goal of teaching concepts and generalizations of different types to different pupils but which are also such as to help achieve and not interfere with concommitant goals related to the development of skills and attitudes.	Identifies several learning theories as they apply to concept development and the learning of generalizations. Can explain the implications of each for teaching strategies when trying to teach concepts and generalizations. Selects the most appropriate learning theory and teaching strategy for achieving particular goals, without interfering with concommitant goals. Explains selection in terms of research findings as well as in terms of the characteristics of particular students in a class.

Locates and develops teaching materials which can be used effectively with the chosen teaching strategy. Analyzes curriculum materials in order to identify actual strategy used rather than that which is stated in the rationale or introduction to the program.

* Develops lesson plans using different strategies to achieve the same objective. Evaluates plan in terms of their success in achieving stated goals.

Teaches concepts in context of content which pupils find interesting.

Identifies some of common interests of pupils of certain age levels and socio-economic and ethnic backgrounds.

Develops diagnostic devices and other ways of assessing pupil interests.

Evaluates materials of instruction in terms of criteria related to factors affecting interest level for those using them.

Provides direct and vicarious experiences needed to develop concepts and generalizations. Relates new material to past learning and experiences.	Explains ways of identifying kinds of experiences which students have had in the past in school and in other situations. Locates and develops materials which can be used to teach concepts and generalizations. Identifies and uses teaching techniques and learning episodes which are appropriate both for teaching concepts and generalizations and for arousing interest among pupils.
Establishes a classroom climate in which pupils feel comfortable and in which they receive reinforcement for their efforts to understand and apply concepts and generalizations. a. Encourages pupils to disagree with the teacher and with others. b. Reinforces pupil's attempts to express their ideas. c. Listens to students and makes use of comments in a discussion, either in own remarks or by asking others to react to them. d. Treats each pupil with respect. Accepts his feelings and ideas and gives consideration to them. Avoids the use of sarcasm and of demeaning words and actions. Demonstrates faith in student through actions and words.	Identifies factors which help create a warm climate and those which interfere with thinking. Identifies ways of reinforcing pupil behaviors and helping pupils feel that their ideas are of worth. Can explain use of reinforcement to effect learning. Analyzes video tapes or transcripts of classroom dialogues to learn to identify more clearly those teacher behaviors which hamper and those which facilitate the development of a warm and open classroom climate.

	Helps pupils identify limitations of statements of generalizations and theories by asking questions and providing materials to help them modify their statements, not just telling them that something is wrong with a statement or what is wrong. Uses instructional materials which present different theories about the same topics.	Identifies major and c in the social sciences of the major generaliz generally accepted by the disciplines. Comp and generalizations we he can identify their strengths and can reco of stating the same th recognize other ways o same thing, while reco of statements as a res as failure to limit a enough or to include a factors which affect w generalization is accu
	Asks pupils to cite examples of the application of a generalization to different data and, where possible, to familiar situations close to their own lives.	Can cite examples of t a generalization to di Recognizes limitations which are not useful b not fit all of the var make the generalizatio
2. Uses generalizations and concepts learned previously to understand new problems and situations.	Finds out what concepts and generalizations have been taught in previous courses which pupils can use and build upon in this course. Provides carefully-designed experiences to provide continuity and sequence in the use of concepts and generalizations throughout a course.	Can explain importance and sequence in curric transfer of learning.

lps pupils identify limitations statements of generalizations d theories by asking questions d providing materials to help em modify their statements, not st telling them that something wrong with a statement or what wrong.	Identifies major and conflicting theories in the social sciences. Identifies some of the major generalizations which are generally accepted by practitioners in the disciplines. Comprehends theories and generalizations well enough so that he can identify their limitations and strengths and can recognize other ways of stating the same thing, while recognize other ways of stating the same thing, while recognizing inadequacies of statements as a result of such things as failure to limit a generalization enough or to include all important factors which affect whether or not the generalization is accurate.
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nds out what concepts and general-zations have been taught in previous ourses which pupils can use and build on in this course. Provides arefully-designed experiences to rovide continuity and sequence in the se of concepts and generalizations hroughout a course.	Can explain importance of continuity and sequence in curriculum building for transfer of learning.

Identifies useful ways of finding out what concepts and generalizations have been introduced in past courses. Identifies ways of including many of these concepts and generalizations in teaching a specific course.

Plans units and courses with both vertical and horizontal articulation in mind. Plans for continuity and sequence.

Works with other staff members to develop a curriculum which provides for continuity and sequence for concepts and generalizations within the social studies program and which relates what is learned in one course to that learned in courses in other areas.

Provides many opportunities for pupils to apply social science concepts and generalizations to new situations and contemporary problems. Asks them to generalize about the usefulness of concepts and generalizations as tools to help them understand new problems or situations.

Can explain the usefulness of concepts for making sense out of new data. Can illustrate their usefulness as tools for attacking new problems.

Identifies materials and sources for locating materials which can be used to provide pupils with opportunities to apply previously-learned concepts to new situations. Develops own materials and learning experiences to provide similar opportunities.

Encourages pupils to become personally involved in contemporary problems and to identify those of the past which are still present today and those in other countries which also exist in this country.

Follows current affairs and analyzes them by using previously-learned concepts and generalizations.

Uses content materials which facilitate a student's ability to identify historical problems and hopes similar to his/her own. Adjust content and materials both to the general characteristics of a class, such as its "culture" and the socio-economic and ethnic background of pupils, and to individual interests.

Has a broad understanding of historical developments and problems as well as of social, economic, and political problems of today in both this country and in other cultures. Can cite examples of past events and problems which illustrate present-day problems.

Identifies materials which are useful in relating past events and problems to current situations or which relate problems in other countries to those in this country.

Can explain differences in the extent to which different types of learning materials are likely to involve students in terms of both interests and emotions.

	Can explain ways in which knowledge about the "culture" of a class and the "socio-economic and ethnic composition of a class can help a teacher identify content, instructional materials, and learning experiences of interest to class members.
Uses questions which call for application, not just for recall of facts, concepts, or generalizations.	Uses some taxonomy or system of discriminating between levels of thought. Identifies different thought levels in video tapes of class discussions or in transcripts os such discussions. Identifies types of questions which are most likely to stimulate application rather than just recall of information.
Uses test items and other evaluation devices which evaluate application rather than just recall.	Develops test items and other evaluation devices which demand application rather than just recall. Identifies published evaluation devices which can be used to measure application. Discriminates between valid and invalid items for testing application. Applies an analysis scheme to a tape or transcript of a class or group discussion in order to evaluate the ability of different pupils to apply concepts and generalizations to new data.

3. Uses previously-learned concepts and generalizations to set up hypotheses or to predict.	After problem-solving episode, asks pupils to identify steps in their discussions which helped and those which hampered problem-solving. More specifically, helps pupils identify ways of stimulating own hypotheses by thinking of situations which had similar elements and by scanning previously-learned concepts and generalizations for possible relevant ones which might be used singly or in combination to help explain or predict. Helps pupils clarify these hypotheses by careful definition of terms.	Can explain the relation previously-learned conce generalizations to hypot making or prediction. C identify thinkirg proces volved in hypothesis-mak

ed concepts o set up ict.	After problem-solving episode, asks pupils to identify steps in their discussions which helped and those which hampered problem-solving. More specifically, helps pupils identify ways of stimulating own hypotheses by thinking of situations which had similar elements and by scanning previously-learned concepts and generalizations for possible relevant ones which might be used singly or in combination to help explain or predict. Helps pupils clarify these hypotheses by careful definition of terms.	Can explain the relationship of previously-learned concepts and generalizations to hypothesis-making or prediction. Can identify thinking processes involved in hypothesis-making.

Asks questions calling for predictions or hypotheses. Uses follow-up questions, if necessary, to help pupils draw upon past learning in making predictions. Uses a strategy for sequencing questions to get pupils to use thought processes needed to make predictions.

Identifies sequence of questions which can be used in a strategy to help pupils use past learning to hypothesize. Discriminates between types of questions designed to elicit different types of thinking.

Uses some system of analysis to analyze a video tape or transcript of a class discussion in order to identify: (a) questions which elicit hypotheses, (b) instances of hypothesis-making by pupils. Suggests ways in which the teacher might have helped pupils clarify their hypotheses or learn how to scan past learning for relevant concepts and generalizations to use in hypothesis-making.

Establishes a classroom climate conducive to creative thinking and hypothesizing. Reinforces divergent thought and attempts to think creatively, without suggesting that an hypothesis or prediction is actually substantiated by evidence.	Identifies effects of different types of classroom climate upon creative thinking and the willingness of pupils to suggest hypotheses and predictions. Can identify places in transcripts or video tapes of own teaching or other people's teaching in which the teacher facilitated or hampered hypothesis-making. Can explain several ways of reinforcing hypothesis-making attempts without telling pupils that their ideas are correct.
Motivates pupils to interest in a topic so that they will want to hypothesize or predict.	Can explain the importance of motivation, ways of motivating pupils, and some of the common interests of pupils of different age levels. Uses this knowledge as well as knowledge of differing interests and backgrounds of pupils in a class to build lessons.
Uses materials and learning situations which stimulate hypothesis-making or predictions.	Develops materials which give pupils an opportunity to call upon past learning in making predictions or hypotheses. Locates materials prepared by others which can be used to stimulate hypothesis-making (e.g. from curriculum centers and commercial companies). Develops lessons and plans which provide an appropriate sequence of learning activities so that pupils are given an opportunity to hypothesize before they study any materials which explain new data or situations.

	Encourages pupils to continue to set up new hypotheses and to make new predictions as they gather data and test previous hypotheses. Reinforces their attempts to use past learning to do so.	Can explain the way in entists hypothesize, t reject hypotheses, and hypotheses and test th confronted with a prob more about it.
4. Identifies differences in situations which make concepts or generalizations inapplicable.	Uses a variety of examples to help pupils distinguish between situations in which concepts and generalizations are applicable and inapplicable.	Defines major concepts sciences by using eith operational definition examples and non-examp concept.
	Helps pupils identify situations in the past or in other cultures in which generalizations do not hold true; encourages them to identify reasons or conditions which differ. Helps them identify the conditions under which generalizations are valid; that is, helps them identify the variables which must be present for the generalization to hold true.	Identifies some of the izations which are gen by practitioners in th Comprehends theories a well enough to identif tions and strengths. in which some are time bound and why social s zations represent prob absolutes. Identifies must be present for a be applicable. Identifies other times which some generalizat inapplicable.

	Encourages pupils to continue to set up new hypotheses and to make new predictions as they gather data and test previous hypotheses. Reinforces their attempts to use past learning to do so.	Can explain the way in which scientists hypothesize, test, refine or reject hypotheses, and develop new hypotheses and test them as they are confronted with a problem and learn more about it.
uations li-	Uses a variety of examples to help pupils distinguish between situations in which concepts and generalizations are applicable and inapplicable.	Defines major concepts in the social sciences by using either criteria or operational definitions. Identifies examples and non-examples of each concept.
	Helps pupils identify situations in the past or in other cultures in which generalizations do not hold true; encourages them to identify reasons or conditions which differ. Helps them identify the conditions under which generalizations are valid; that is, helps them identify the variables which must be present for the generalization to hold true.	Identifies some of the major generalizations which are generally accepted by practitioners in the disciplines. Comprehends theories and generalizations well enough to identify their limitations and strengths. Can explain ways in which some are time-bound or culture bound and why social science generalizations represent probabilities, not absolutes. Identifies factors which must be present for a generalization to be applicable.
		Identifies other times or cultures in which some generalizations were (are) inapplicable.

5. Recognizes data which support or contradict a generalization; revises generalizations in light of new data.	Encourages modification of generalizations and theories as new knowledge is presented. Provides positive reinforcement to those who modify previous ideas because of new data which challenge old generalizations.	Can explain cle of knowledge in edge is advance and/or natural fact that theor in all fields w the light of ne why no hypothes only that it be every time it i tested. Can diagnose so explain ways of aware of their factual errors tualization, (i factual informa and confusion o another.) Make video tapes or cussions and wr Can explain the edge ad can cit izations and th social sciences which have been in the past bec Identifies ways with positive r explain the imp reinforcement w

Can explain clearly the tentativeness of knowledge in terms of the way knowledge is advanced in the social sciences and/or natural sciences. Accepts the fact that theories and generalizations in all fields will and should change in the light of new evidence. Explains why no hypothesis is ever proved true, only that it becomes more acceptable every time it is not disproved when tested.

Can diagnose sources of error and explain ways of helping pupils become aware of their errors, whether they be factual errors or errors in conceptualization, (including incorrect factual information, erroneous criteria, and confusion of one concept with another.) Makes such diagnoses using video tapes or transcripts of discussions and written work.

Encourages modification of generalizations and theories as new knowledge is presented. Provides positive reinforcement to those who modify previous ideas because of new data which challenge old generalizations.

Can explain the tentativeness of knowledge ad can cite examples of generalizations and theories in both the social sciences and the natural sciences which have been disproved or modified in the past because of new data.

Identifies ways of providing pupils with positive reinforcement. Can explain the importance of using such reinforcement when pupils modify ideas.

Uses a variety of learning experiences which help pupils analyze which data support and which contradict a generalization. Develops exercises to help make pupils aware of the need for considering the question of both relevance and support. Asks questions which probe pupils' comments about why they believe some generalization to be true.

Evaluates pupils' progress in part on the basis of whether they can recognize data which are relevant to a generalization and which support or contradict the statement.

Identifies historical and cross-cultural data which can be used to challenge some generalizations and theories.

Thinks logically and is able to diagnose illogical thinking. Recognizes data which are irrelevant and which do not support a generalization.

Distinguishes between valid and invalid items for testing the ability to discriminate between relevant and irrelevant data and between data which support and data which contradict statements.

Develops valid test items to evaluate the ability of pupils to discriminate between relevant and irrelevant data and between data which support and data which contradict statements.

Identifies published tests which can be used to evaluate these same abilities.

Uses some analysis system to use with taped discussions in order to evaluate pupils' progress on this skill.

Develops scales to use in evaluating other oral and written work; includes a section on identifying relevant data and supporting data.

General Goal

Understands and uses some structure within a single discipline or across disciplines to help analyze new data. Can explain the lack of any agreement upon one structure, the changing nature of knowledge, and the reasons for these changes.

Makes use in his teaching of some conceptual or theoretical structure to help pupils gain more intellectual power or tools of analysis for examining new situations. Provides pupils with learning experiences and materials which will help them structure concepts.

Provides a variety of experiences to demonstrate to pupils that previously-learned concepts and generalizations aid them in making sense out of new data and in attacking new problems (including setting up hypotheses about them.)

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Makes use in his teaching of some conceptual or theoretical structure to help pupils gain more intellectual power or tools of analysis for examining new situations. Provides pupils with learning experiences and materials which will help them structure concepts.

Identifies major and conflicting theories in the social sciences. Identifies key concepts and generalizations commonly accepted by practitioners in the field. Can explain some of the different ways of structuring disciplines in the social sciences.

Can explain the characteristics of social science disciplines as disciplines. Identifies aspects of a discipline such as field studied, structure of knowledge, type of explanation used, and methods of advancing knowledge in field, including use of analytical questions related to key concepts or variables in structure of knowledge.

Provides a variety of experiences to demonstrate to pupils that previously-learned concepts and generalizations aid them in making sense out of new data and in attacking new problems (including setting up hypotheses about them.)

Can explain how concepts and generalizations can be used as tools by practitioners of a discipline and by the ordinary citizen as they try to to advance knowledge in a field or study problems.

Locates and develops materials and learning experiences (as evidenced in lessons and unit plans) which provide pupils with varied experiences to demonstrate the usefulness of concepts and generalizations in studying new data and problems.

Provides opportunities for pupils to examine concepts from a field in an endeavor to identify those of broad scope and those of less significance (or those subsumed under them) and to identify those which are particularly useful as tools for looking at new data.	Identifies concepts which are subsumed under others. Identifies concepts which are useful as analytical tools. Locates and develops materials and learning experiences which ask pupils to organize concepts in terms of scope and analytical use. Develops lesson plans to help the teacher use such materials and provide such experiences.
Asks questions aimed at getting pupils to look for possible ways of applying concepts from one field to another or for similarities and differences among concepts of two or more fields.	Identifies concepts which are used by more than one social science discipline. Can explain different usage of the same term in different disciplines or in different theories within one discipline. Develops materials and lesson plans to provide for pupil experiences in comparing concepts within different fields. Fits lessons into context of unit being studied. Identifies types of questions which call for application rather than just recall.

Uses a variety of experiences which enable pupils to analyze problems in the light of the kinds of questions asked and the concepts and generalizations used in each of the social science disciplines.

Prevents classroom discussions from becoming unduly vague or ambiguous or from insignificant content; uses data to develop concepts and generalizations, analyze values, or evaluate sources of information.

Provides opportunities for developing a skeptical attitude toward the finality of knowledge.

a. Gives pupils opportunities for looking at different theories and structures in a field.

b. Especially at the senior high level, gives some pupils opportunities to analyze and test theories currently under dispute among practitioners of a discipline.

Develops some unit plans which are interdisciplinary in nature. Develops some lesson plans which provide pupils with experiences of drawing upon the different social sciences as they analyze a topic or problem.

Identifies types of probling questions which can be used to get pupils to clarify points and identify points needing further information. Identifies questions which call for generalization, evaluation, and value analysis.

Can explain how disciplines are changing constantly as
--new information is added
--new concepts direct attention to different data
--new theories are developed to guide research and to organize and explain phenomena
--practitioners get interested in new problems of great relevance to them.

Can explain some of the changes within disciplines which illustrate the changing nature of knowledge.

c. Uses materials of instruction which present opposing theories. Uses learning experiences which help pupils recognize limitations of generalizations they have developed earlier. Does not try to reach closure on an idea; makes statements which indicate that pupils should hold ideas tentatively, subject to change in the light of new evidence.

Can identify and
and explicit assu
the terminology a
about the nature
various social sc

Can explain the n
of all types of s
definitions, fact
normative, genera
inferences.)

Uses evaluation devices to find out whether or not pupils understand the changing nature of knowledge and the usefulness of some structure of concepts for analyzing new data.

Develops evaluati
purposes. Differ
valid and invalid
evaluating achiev

General Goal

Understands the perspectives, methodology, investigate techniques (including types of questions asked), and methods of explanation used in the different social sciences and is able to apply them to the investigation of problems and the evaluation of social science information found in books, newspapers, magazines, films, television programs, and speeches.

Gives pupils opportunities to use some of the methods of research used by practitioners in the social science disciplines.

a. Asks pupils to compare methods of explanation used in the different social sciences.

b. Asks pupils to evaluate the limitations and strengths of the methods and techniques.

Identifies and ca
of study, the dif
questions asked,
and techniques us
edge, and the typ
by the different
disciplines. Can
between empirica
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scientists as con

c. Uses materials of instruction which present opposing theories. Uses learning experiences which help pupils recognize limitations of generalizations they have developed earlier. Does not try to reach closure on an idea; makes statements which indicate that pupils should hold ideas tentatively, subject to change in the light of new evidence.	Can identify and explain the implicit and explicit assumptions underlying the terminology and the set of values about the nature and domain of the various social sciences. Can explain the nature and limitations of all types of statements (e.g. definitions, factual, value or normative, generalizations, including inferences.)
Uses evaluation devices to find out whether or not pupils understand the changing nature of knowledge and the usefulness of some structure of concepts for analyzing new data.	Develops evaluation devices for such purposes. Differentiates between valid and invalid test items for evaluating achievement of this goal.
Gives pupils opportunities to use some of the methods of research used by practitioners in the social science disciplines. a. Asks pupils to compare methods of explanation used in the different social sciences. b. Asks pupils to evaluate the limitations and strengths of the methods and techniques.	Identifies and can explain the fields of study, the different types of questions asked, the general methodology and techniques used in advancing knowledge, and the types of explanation used by the different social science disciplines. Can explain differences between empirical methods and other methods of trying to know. Can explain problems faced by social scientists as compared to natural

c. Provides a variety of experiences to demonstrate that the social sciences are not based upon sheer guesswork or opinion but on established empirical methods.	scientists and the consequent limitations of different techniques for advancing knowledge, but can also explain the advances which social scientists have made in research methods and techniques.
d. Provides experiences to demonstrate that sequence and relationships (such as correlational relationships) do not necessarily imply causation.	Can explain and use techniques used in controlled experiments, survey research, and other types of empirical research, including documentary analysis of the historian.
e. Although providing experiences in a number of techniques, focuses upon those which are useful across disciplines and those of particular use to citizens either as consumers of social science information or as tools for study of common problems facing citizens.	Identifies techniques of inquiry used by practitioners of different disciplines which are of particular use to citizens as they attack problems.
f. Asks questions designed to get pupils to generalize about possible application of social science techniques to problems faced by citizens.	
g. Asks questions designed to get pupils to generalize about possible application of social science techniques to problems faced by citizens.	Identifies types of questions which can be used to stimulate different levels of thought including application, generalizing, evaluating, and hypothesizing.

h. Encourages pupils to incorporate creative, intuitive methods in their inquiry approach.	Can explain the place of intuitive and creative thought in inquiry and factors which seem conducive to such thought.
Establishes open and warm classroom climate conducive to inquiry by students.	Identifies factors which affect classroom climate and can explain the importance of an open climate in helping pupils develop both creative and analytical thought.
Uses instructional materials and learning experiences which promote inquiry by pupils and give them opportunities to use methods and techniques of social scientists.	Locates and develops materials which lend themselves to helping pupils learn investigative techniques of social scientists and how to use these techniques. Develops lesson and unit plans which provide for experiences in using investigative techniques and in such lessons on content of general interest to pupils of the specified age level and community.
Uses inquiry strategies of teaching to help pupils learn how to inquire.	Can explain differences in teaching strategies and the appropriateness of each for working toward different goals. Identifies the elements of several different teaching strategies and the sequence of these elements in the strategies. inquiry skills, and explains his choice in terms of goals and research evidence.

		Develops lesson a inquiry teaching inquiry by pupils terms of effectiv goals.
	Evaluates pupil progress in part in terms of ability to use certain types of investigative techniques.	Distinquishes bet test items and ev evaluating abilit inquiry.
		Develops evaluati measure progress inquiry.
General Goal Uses higher levels of thought as appropriate to goals and tasks.	In discussion, uses a flow of questions designed to move the class to higher levels of thought. (Uses questions aimed at higher levels of thought. Gives focus and refocus to discussions when necessary to move to higher levels of thought.) Uses a discussion strategy appropriate to type of thinking which is goal.	Identifies diffe thinking; uses s system of discri of thought. (Re between recall o generalizations; izing, drawing i ceptualizing by including hypoth evaluation, and
		Selects objectiv levels of though selection with o teaching social
		Identifies quest forth different

Develops lesson and unit plans using inquiry teaching strategies to promote inquiry by pupils. Evaluates plans in terms of effectiveness in achieving goals.

Evaluates pupil progress in part in terms of ability to use certain types of investigative techniques.

Distinquishes between valid and invalid test items and evaluation devices for evaluating ability to use techniques of inquiry.

Develops evaluation instruments to measure progress in using techniques of inquiry.

In discussion, uses a flow of questions designed to move the class to higher levels of thought. (Uses questions aimed at higher levels of thought. Gives focus and refocus to discussions when necessary to move to higher levels of thought.) Uses a discussion strategy appropriate to type of thinking which is goal.

Identifies differences in levels of thinking; uses some one taxonomy or system of discriminating between levels of thought. (Recognizes differences between recall of facts, concepts, and generalizations; translation, generalizing, drawing inferences and conceptualizing by pupils; application, including hypothesizing; analysis, evaluation, and synthesis.)

Selects objectives requiring higher levels of thought. Justifies their selection with overall rationale for teaching social studies.

Identffies questions likely to call forth different levels of thought.

Identifies sequence of behaviors involved in different thought processes.

Identifies different types of discussion strategies and can explain advantages and disadvantages of using each type for different purposes. Identifies elements and sequence of elements used in each strategy.

Uses some analysis scheme to analyze own or other class discussions (on video tape or in transcript form) for levels of thought, for types of questions asked, for use of transitions and summaries, for logical flow of ideas, for type of discussion strategy.

Develops lesson plans which include sample questions which may be used to get pupils to develop higher levels of thought.

Develops lesson plans using different discussion strategies to stimulate different thought processes.

Establishes a warm and open classroom climate which is conducive to thinking on the part of the pupils.

Identifies factors affecting classroom atmosphere and ways of reinforcing attempts by pupils to think for themselves.

Uses varied types of learning materials and experiences to stimulate thought. (e.g. skills exercises, case studies, simulation games, role playing episodes, adapted readings, problem analysis, artifcats and other audio-visual materials, etc.)

Analyzes video tapes or transcripts of class discussions to identify factors which hamper and those which facilitate the development of a warm and open climate. Evaluates climate of classroom; makes suggestions for developing a warmer, more open climate.

Identifies different skills involved in different kinds of thought. For example, identifies different skills involved in evaluation of material.

Identifies types of skills exercises which can be used to teach skills involved in different kinds of thought processes.

Identifies valid and invalid test exercises for teaching different skills involved in different thinking processes. Evaluates exercises in part in terms of validity.

Locates published examples of exercises to develop skills involved in thought processes.

Develops own exercises to use in teaching different skills involved in thought processes.

Locates or develops instructional materials (other than skills exercises) which can be used to stimulate pupils to different kinds of thinking.

Can explain comparative advantages and disadvantages of different types of media and for stimulating different levels of thought. Sets up and uses criteria for evaluating different media, including criteria related to how well the material will stimulate thought processes of different kinds.

Develops lesson and unit plans for using selected media and providing learning experiences to stimulate different kinds of thought above the level of recall.

Uses instructional materials, learning experiences and specific teaching techniques to motivate pupils -- to arouse their interest in the topic under consideration and social studies in general so that they will want to think more deeply about topics.

Can explain different theories of motivation and draw implications for selection and/or development of instructional materials, teaching strategies, and specific teaching techniques and learning experiences and for the sequencing of such experiences.

Identifies some of developmental needs and interests of pupils at different maturation levels and from different backgrounds.

Identifies some of reading interests of pupils of certain age levels and analyzes materials to evaluate the interest appeal of books for different age groups and pupils with different interests.

Identifies useful criteria for adapting resource units to a specific class.

Provides for individual differences in interests, abilities of various kinds, conceptual styles, and personality types among his pupils.	Identifies types of individual differences which may be found among students. Can explain ways of working with pupils to take into account these differences. Identifies types of diagnostic devices which can be used to identify different types of abilities, including skills involved in different thought processes, different interests, and different cognitive and personality systems. Interprets results of findings from use of these measures. Locates and develops materials of instruction which can be used by students with different abilities, interests, etc. Identifies factors affecting reading level of materials. Evaluates reading materials in terms of these factors in order to identify the reading level of materials. Uses these factors to adapt reading level of materials to fit pupils in his class.
Uses inquiry strategies to teach higher level thought processes.	Can explain differences in teaching strategies and the appropriateness of each for working toward different goals. Identifies the elements of different inquiry strategies and the sequence of these elements in each. Explains his choice of an inquiry strategy for teaching higher levels of thought in terms of his goals and research criteria.

Develops lesson and unit plans using some form of an inquiry teaching strategy. Evaluates plan in terms of effectiveness in achieving goals.

Evaluates pupils' progress in developing higher levels of thought rather than just recall.

Identifies several commonly-used tests and/or types of devices for evaluating thought processes. Develops own devices for such evaluation.

Discriminates between valid and invalid items for evaluating these processes.

General Goal

Is skilled in problem-solving, as indicated by the following behaviors:

In General

Creates a warm and open climate which facilitates student learning.

a. Encourages pupils to disagree with the teacher and others and to think for themselves.
b. Asks for pupils' perceptions of the teacher's actions and comments.
c. Accepts pupils' suggestions without reacting negatively or punatively. However, expresses own feelings about actions honestly.
d. Reinforces pupils' attempts to express their own ideas; encourages divergent thought.
e. Listens to students and makes use of comments in a discussion either in own remarks or by asking others to react to them.
f. Uses activities to help pupils and teacher become better acquainted.

Uses meaningful problem situations which are related to the interests of pupils and suitable to their maturity level and socio-economic and ethnic backgrounds. Uses instructional materials presenting varied points of view.

In General

Identifies factors
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Analyzes video ta
own or other class
identifies behavi
behavior which fa
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Can explain the u
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Identifies common
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Is alert to incon
problems, and is
Identifies types
be studied on the
information, time
community factors
study of certain
criteria to follo
versial issues.

Identifies resour
school and the co
of specific probl

In General

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f. Uses activities to help pupils and teacher become better acquainted.

Uses meaningful problem situations which are related to the interests of pupils and suitable to their maturity level and socio-economic and ethnic backgrounds. Uses instructional materials presenting varied points of view.

In General

Identifies factors which help create a warm and open classroom climate and those which create a climate which interferes with thinking.

Analyzes video tapes or transcripts of own or other classroom discussions; identifies behavior which hampers and behavior which facilitiates the development of a warm and open climate.

Can explain the use of reinforcement to effect behavioral change; identifies ways of reinforcing pupil behavior.

Identifies common interests of pupils of different maturity levels and socio-economic and ethnic backgrounds. Can explain ways of identifying specific interests of pupils in a class.

Is alert to incongruities, recognizes problems, and is concerned about them. Identifies types of problems which can be studied on the basis of available information, time limitations, and community factors which might limit the study of certain problems. Identifies criteria to follow in handling controversial issues.

Identifies resources available in the school and the community for the study of specific problems.

Uses pupil-teaching planning to identify problems for study and/or specific aspects of the problem for study. Permits considerable choice of individual and small-group projects within the unit of study.	Can explain the relationship between pupil choice, pupil-teaching planning, and motivation for study. Identifies different ways of handling pupil-teacher planning and can explain the steps to follow in each.
Uses an inquiry process of teaching inquiry skills and methods. Gives pupils chances to use inquiry rather than just talk about it.	Can explain the range of teaching strategies from exposition to discovery. Identifies several different types of inquiry strategies and the steps to follow in each. Can differentiate between the role of the teacher and the role of pupils in each strategy. Can explain the advantages and disadvantages of different teaching strategies for the purposes of achieving different goals or teaching specific things. Draws upon research evidence in making this explanation.
Provides experiences which build a positive attitude toward using systematic problem-solving behavior. Uses learning experiences of interest to pupils.	Locates or develops learning experiences which can be used to help pupils analyze the problem for study. Selects experiences which are of interest to the pupils in the class.
Uses a step-by-step procedure for structuring the first problems for study to enable pupils to identify the skills and thought sequence involved in problem-solving. Uses inquiry about inquiry processes, helping pupils identify the steps which they have taken in their inquiry analyze the effectiveness of their efforts, and clarify the inquiry process.	Can explain different inquiry models and the basic steps found in most of them. Can explain the thought processes involved in different stages of problem solving. (e.g. in hypothesizing, deducing consequences of hypotheses to guide the collection of data, testing hypotheses.)

	Provides opportunities for pupils to draw upon any social science data, generalizations, or techniques of inquiry useful in analyzing a problem.	Can explain the the social scie different types the types of an inquiry techniq tioners of each problems.
	Adjusts learning experiences and materials of instruction to the many types of individual differences in a class; makes direct provision for meeting the needs of the individual pupils rather than just lowering the level of teaching to meet the general ability level of the class. Uses experiences in which pupils can experience success. At times groups pupils for work on particular skills.	Identifies the differences whi class. Identifies type which can be us erences among p ences in the de problem-solving informal ways differences. findings from Identifies dif ular group of the abilities in the group. Can explain wa to take into a abilities, ski styles, and pe
1. Attacks problems in a rational manner: a. Identifies a problem for study and establishes a purpose for inquiry.	Uses instructional materials and learning experiences to arouse concern about problem or possible problem for study. Uses materials which help pupils identify some of the ramifications of the problem and varied points of view about it.	Locates or dev als and learni interest in ar blem selected problems for s in part becaus quickly some problem and v

	Provides opportunities for pupils to draw upon any social science data, generalizations, or techniques of inquiry useful in analyzing a problem.	Can explain the relevance of each of the social science disciplines to different types of problems. Identifies the types of analytical questions and inquiry techniques which the practitioners of each would use in analyzing problems.
	Adjusts learning experiences and materials of instruction to the many types of individual differences in a class; makes direct provision for meeting the needs of the individual pupils rather than just lowering the level of teaching to meet the general ability level of the class. Uses experiences in which pupils can experience success. At times groups pupils for work on particular skills.	Identifies the many types of individual differences which may be found in a class. Identifies types of diagnostic devices which can be used to identify differences among pupils including differences in the degree to which they handle problem-solving skills. Identifies informal ways of ascertaining these differences. Interprets the results of findings from these measures. Identifies differences among a particular group of students. Can discuss the abilities and skills of each pupil in the group. Can explain ways of working with pupils to take into account differences in abilities, skills, interests, cognitive styles, and personality types.
onal r study se for	Uses instructional materials and learning experiences to arouse concern about problem or possible problem for study. Uses materials which help pupils identify some of the ramifications of the problem and varied points of view about it.	Locates or develops instructional materials and learning experiences to arouse interest in and concern about the problem selected for study or possible problems for study. Selects materials in part because they help pupils identify quickly some of the ramifications of the problem and varied viewpoints about it.

1) Uses criteria for selecting problem for study.	Helps pupils establish criteria for selecting problems for study. Asks them to apply these criteria when choosing a problem for study.	Identifies criteria in selecting proble the importance of t spread interest in class members, the materials on it and which might be used about it, the time ing it, etc.)
2) Identifies basic issues and conflicts. Identifies assumptions of those holding different viewpoints about the problem.	Provides opportunities for pupils to identify value conflicts and basic issues. Uses exercises at times to help them learn to pick out basic assumptions.	Locates or prepares materials, includin help pupils learn t conflicts and basic pick out assumption
3) Defines terms in statement of problem.	Asks pupils to define terms they use in stating a problem for study. If terms cannot be defined clearly, asks them to reword the statement of their problem.	Can explain the imp definition of terms
4) When confronted with a major or difficult problem, tries to identify sub-problems which need investigation in order to illuminate the major problem.	Helps pupils break down large or difficult problems into sub-problems which can be studied to throw light on the major problem.	Identifies major as which would throw l problem. Can expla of the sub-problems problem. Organizes with minor points s points.

ng	Helps pupils establish criteria for selecting problems for study. Asks them to apply these criteria when choosing a problem for study.	Identifies criteria which might be used in selecting problems for study (e.g. the importance of the problem, widespread interest in the problem among class members, the availability of materials on it and the kinds of data which might be used to test hypotheses about it, the time available for studying it, etc.)
nd sump- fferent lem.	Provides opportunities for pupils to identify value conflicts and basic issues. Uses exercises at times to help them learn to pick out basic assumptions.	Locates or prepares instructional materials, including exercises, to help pupils learn to identify value conflicts and basic issues and to pick out assumptions in an argument.
t of	Asks pupils to define terms they use in stating a problem for study. If terms cannot be defined clearly, asks them to reword the statement of their problem.	Can explain the importance of a careful definition of terms in stating problems.
jor or to ch er to lem.	Helps pupils break down large or difficult problems into sub-problems which can be studied to throw light on the major problem.	Identifies major aspects of a problem which would throw light on the larger problem. Can explain the relationship of the sub-problems to the larger problem. Organizes idea logically, with minor points subsumed under major points.

b. Sets up hypotheses about causes of problem and about possible consequences of following different courses of action to try to solve it.	Uses an inquiry strategy of teaching in which pupils are asked to hypothesize about causes and alternative courses of action before studying other people's analyses of the problem.	Identifies and strategies of exposition to the advantages each for achie
1) Sets up hypotheses by scanning similar situations and concepts and generalizations used to make sense out of them. At times combines several previously-learned generalizations to form hypothesis.	Follows some model for problem-solving which calls for analysis of causes of a problem prior to careful study of action.	Identifies the followed in st some model for calls for anal problem before courses of act
	Helps pupils understand the thought processes involved in hypothesizing by asking questions about how they arrived at their hypotheses. Also asks questions to stimulate hypotheses by asking them to think of any situation similar to the one they are examining, to think of concepts and generalizations which they arrived at in studying that situation, to consider whether or not the situations differ so much or in such key ways that the generalizations will not apply or will have to be modified or combined with other generalizations to make sense out of the new situation.	Identifies the involved in se Identifies que to stimulate h pupils improve hypothesize.
	Provides instructional materials to stimulate hypotheses.	Locates or pre materials to h

causes of le conse- ferent to solve	Uses an inquiry strategy of teaching in which pupils are asked to hypothesize about causes and alternative courses of action before studying other people's analyses of the problem.	Identifies and can explain different strategies of teaching, ranging from exposition to discovery. Can explain the advantages and disadvantages of each for achieving specific goals.
nning simi- ts and gen- sense out es several lizations	Follows some model for problem-solving which calls for analysis of causes of a problem prior to careful study of action.	Identifies the steps which might be followed in studying a problem. Uses some model for problem-analysis which calls for analysis of causes of problem before considering alternative courses of action in much detail.
	Helps pupils understand the thought processes involved in hypothesizing by asking questions about how they arrived at their hypotheses. Also asks questions to stimulate hypotheses by asking them to think of any situation similar to the one they are examining, to think of concepts and generalizations which they arrived at in studying that situation, to consider whether or not the situations differ so much or in such key ways that the generalizations will not apply or will have to be modified or combined with other generalizations to make sense out of the new situation.	Identifies the thought processes involved in setting up hypotheses. Identifies questions which can be used to stimulate hypotheses and to help pupils improve their ability to hypothesize.
	Provides instructional materials to stimulate hypotheses.	Locates or prepares instructional materials to help pupils hypothesize.

2) Defines terms used in hypotheses.	Asks pupils to define terms used in their hypotheses. Demonstrates the importance of doing so in order to test them. Encourages questioning to clarify hypotheses.	Can explain the imp defining terms in a is to be tested.
3) Uses hypotheses to guide collection of data; keeps them in mind during study of problem.	Has someone in class make a list of hypotheses for later testing. Returns to list from time to time to see if pupils wish to eliminate any, revise any, or add to the hypotheses already on the list. Encourages them to think of additional hypotheses and to revise old ones as they investigate a problem. Uses reinforcement to do so.	Can explain the imp through with the te rather than just li getting them. Iden flective thought or can explain how peo forth from one stag smooth progression. Can explain the imp hypotheses to guide information. Can explain the use to effect behaviora ways to reinforce b
c. Figures out ways to test hypotheses. Identifies things which would have to be true if hypotheses are true. Deduces consequences of hypotheses to guide collection of data.	Asks pupils what data might be located to help them test their hypotheses. Provides learning experiences and instructional materials to help them learn how to deduce consequences from hypotheses -- consequences about which they can collect information. Provides opportunities for them to learn how using deduced consequences focuses and so makes more efficient their collection of information.	Can explain the way consequences from h more efficient the to test an hypothes Can deduce conseque can also identify i

ypotheses.	Asks pupils to define terms used in their hypotheses. Demonstrates the importance of doing so in order to test them. Encourages questioning to clarify hypotheses.	Can explain the importance of defining terms in a hypothesis if it is to be tested.
e collection mind during	Has someone in class make a list of hypotheses for later testing. Returns to list from time to time to see if pupils wish to eliminate any, revise any, or add to the hypotheses already on the list. Encourages them to think of additional hypotheses and to revise old ones as they investigate a problem. Uses reinforcement to do so.	Can explain the importance of following through with the testing of hypotheses rather than just listing and then forgetting them. Identifies stages of reflective thought or problem-solving and can explain how people move back and forth from one stage to another in a smooth progression. Can explain the importance of using hypotheses to guide the collection of information. Can explain the use of reinforcement to effect behavioral change; identifies ways to reinforce behavior.
est hypoth- ngs which if hypoth- es conse- to guide	Asks pupils what data might be located to help them test their hypotheses. Provides learning experiences and instructional materials to help them learn how to deduce consequences from hypotheses -- consequences about which they can collect information. Provides opportunities for them to learn how using deduced consequences focuses and so makes more efficient their collection of information.	Can explain the way in which deducing consequences from hypotheses helps make more efficient the collection of data to test an hypothesis. Can deduce consequences from hypotheses; can also identify illogical deductions.

	Provides exercises and other instructional materials to teach pupils how to deduce logical consequences from hypotheses and how to recognize illogical deductions.	Locates or materials t logical con and to reco
	Encourages pupils to think of alternative plans for testing hypotheses. If pupils try several of them, to evaluate the plans in terms of their payoff. Helps pupils understand that hypotheses are never really proved.	Can identif for testing explain the retesting h can never b more accept false.
d. Explore problem and dimensions of problem in some detail and sets up new hypotheses or revises old ones about the causes and possible courses of action which might alleviate the problem.	Provides instructional materials and learning experiences which permit pupils to explore different aspects of a problem in an attempt to assess its importance, the people affected, the seriousness of the problem, and its many ramifications.	Locates or rials and p to enable p ramificatio
	Asks pupils to restate the problem after they have explored it in some detail.	Can explain examining a and then re focus inqui
	Asks pupils to reconsider their hypotheses, refine them or revise them, and set up new ones now that they have explored the problem in more detail.	Can explain move back a of reflecti Can also ex careful exp before iden which will collection

Provides exercises and other instructional materials to teach pupils how to deduce logical consequences from hypotheses and how to recognize illogical deductions.	Locates or develops instructional materials to teach pupils to deduce logical consequences from hypotheses and to recognize illogical deductions.
Encourages pupils to think of alternative plans for testing hypotheses. If pupils try several of them, to evaluate the plans in terms of their payoff. Helps pupils understand that hypotheses are never really proved.	Can identify several different plans for testing any one hypothesis. Can explain the importance of testing and retesting hypotheses, since hypotheses can never be proved true and only gain more acceptance as they are not proved false.
Provides instructional materials and learning experiences which permit pupils to explore different aspects of a problem in an attempt to assess its importance, the people affected, the seriousness of the problem, and its many ramifications.	Locates or develops instructional materials and plans learning experiences to enable pupils to explore the many ramifications of a problem.
Asks pupils to restate the problem after they have explored it in some detail.	Can explain the importance of examining a problem in some detail and then restating it in order to focus inquiry.
Asks pupils to reconsider their hypotheses, refine them or revise them, and set up new ones now that they have explored the problem in more detail.	Can explain the way in which people move back and forth from one stage of reflective thought to another. Can also explain the importance of a careful exploration of a problem before identifying the hypotheses which will be used to guide the collection of data.

2. Is skilled in locating information. a. Uses the index and table of contents of a book to locate information. b. Uses the library card catalog to locate books on a topic. c. Uses the Reader's Guide to Periodical Literature to locate magazine articles on a topic. d. Uses varied reference books suitable for locating specific types of information. e. Skims to locate information quickly in a newspaper or a book without an index.	Provides a program of experiences which help pupils learn specific skills in locating information. Teaches skills in context and provides many opportunities for pupils to use and so reinforce and improve their skills during the course.	Can explain the i ing skills specif assuming that pup because they need tasks. Draws upo to support positi Identifies the sk locating informat clearly enough, i ponents of each, figure out ways o evaluating pupil them. Demonstrates the skills himself/he Can explain the i many opportunitie they have been in to learn to trans asked to do so. to build a compre
	Diagnoses present level of pupils' skills and builds upon what they can already do. Adjusts instructional materials and learning experiences to individual differences, perhaps through group work, individual learning packets, etc.)	Identifies and ca diagnostic device of locating infor own diagnostic ex Keeps a careful r each pupil makes

Provides a program of experiences which help pupils learn specific skills in locating information. Teaches skills in context and provides many opportunities for pupils to use and so reinforce and improve their skills during the course.

Can explain the importance of teaching skills specifically, rather than assuming that pupils will learn them because they need them to do certain tasks. Draws upon research evidence to support position.

Identifies the skills involved in locating information. Defines them clearly enough, including the components of each, so that he/she can figure out ways of teaching them and evaluating pupil progress in learning them.

Demonstrates the ability to use these skills himself/herself.

Can explain the importance of providing many opportunities to use skills after they have been introduced if pupils are to learn to transfer them without being asked to do so. Works with other staff to build a comprehensive skills program.

Diagnoses present level of pupils' skills and builds upon what they can already do. Adjusts instructional materials and learning experiences to individual differences, perhaps through group work, individual learning packets, etc.)

Identifies and can interpret published diagnostic devices dealing with skills of locating information. Develops his own diagnostic exercises.

Keeps a careful record of progress which each pupil makes on each skill.

	Uses skills exercises and other learning experiences to teach the skills.	Locates and oth teach e
	Motivates pupils to interest in the unit topic so that they will want to locate the necessary information about it.	Can exp motivat
	Evaluates skills in locating information as well as other thinking skills or knowledge of concepts of generalizations.	Can exp to pupi way in goals b which h
		Develop locatin
3. Is skilled in gathering and comprehending information.	In General Provides experiences which build upon what pupils can already do and which provide for sequential use of skills throughout a course. Teaches skills in context of the problem under study in the unit in order to help pupils learn the usefulness of the skills.	In Gene Can exp skills Can exp opportu fer of Works w compreh Can exp researc differe Locates devices skill a

	Uses skills exercises and other learning experiences to teach the skills.	Locates or develops skills exercises and other learning experiences to teach each skill.
	Motivates pupils to interest in the unit topic so that they will want to locate the necessary information about it.	Can explain various principles for motivating pupils.
	Evaluates skills in locating information as well as other thinking skills or knowledge of concepts of generalizations.	Can explain the importance of feedback to pupils' learning. Can explain the way in which pupils infer the teacher's goals by examining the kinds of things which he/she evaluates. Develops tests to evaluate skills in locating information.
compre-	In General Provides experiences which build upon what pupils can already do and which provide for sequential use of skills throughout a course. Teaches skills in context of the problem under study in the unit in order to help pupils learn the usefulness of the skills.	In General Can explain the importance of teaching skills specifically. Can explain the importance of many opportunities to use skills for transfer of learning. Works with other teachers to develop a comprehensive skills program. Can explain the implications of research findings for teaching the different skills. Locates or develops diagnostic devices for identifying levels of skill achievement.

a. Uses sub-questions or deduced consequences of hypotheses to guide collection of data and to determine relevancy of data.	Asks pupils to deduce consequences from hypotheses or to set up sub-questions to guide study. Provides instructional materials and learning experiences to teach them the value of doing so in order to guide the collection of data and to determine relevance. Provides opportunities and instructional materials useful for teaching the skill and practicing it at different times during the year. See also page 25.	Can expl an inves or deduc See also
b. Reads with understanding.	Provides materials suited to different reading levels and interests of pupils. Uses learning experiences in which those who have read different materials can all make contributions to the class.	Identifi and can tests. Develops exercise skills. Identifi of ident pupils c skills. Evaluate of readi as well the unit Locates specific Identifi a wide r steps to

ced
to
nd
data.

Asks pupils to deduce consequences from hypotheses or to set up sub-questions to guide study. Provides instructional materials and learning experiences to teach them the value of doing so in order to guide the collection of data and to determine relevance. Provides opportunities and instructional materials useful for teaching the skill and practicing it at different times during the year.

See also page 25.

Provides materials suited to different reading levels and interests of pupils. Uses learning experiences in which those who have read different materials can all make contributions to the class.

Can explain the importance of focusing an investigation by using sub-questions or deduced consequences from hypotheses.

See also page 25.

Identifies published diagnostic tests and can interpret results on these tests.

Develops own diagnostic tests or exercises to identify level of reading skills.

Identifies and can explain other ways of identifying the extent to which pupils can handle different reading skills.

Evaluates reading materials in terms of reading level and interest appeal as well as in terms of usefulness for the unit topic.

Locates or adapts reading materials for specific reading levels.

Identifies different ways of handling a wide reading program and can explain steps to follow in each.

		Demonstrates the different illustrate wh each skill.
	Provides a series of learning experiences designed to teach pupils each of the reading skills and to give them practice in using them.	Can explain, findings, the reading skill progress whic a skills prog ing each skil
	Provides feedback to pupils on their progress in learning reading skills. Reinforces their efforts to improve them.	Can explain t back to the l
		Can explain t to effect beh ways of reinf
1) Decides on purpose for reading.	Helps pupils establish purposes before they begin any reading assignment.	Can explain r importance of before readin
	Provides some learning experiences to demonstrate the value of establishing a purpose before beginning reading.	Develops inst plans learnin strate the wa purposes for
2) Reads for main ideas; uses introductions, summaries, headings, first sentences in paragraphs and signal words to help identify main ideas.	Uses exercises on current events materials and on reading materials used in unit to teach pupils to pick out the main idea(s) in a paragraph or selection.	Identifies de tend to empha
	At times asks pupils to summarize the main points in a reading selection; projects several summaries (without names) and asks pupils to pick out the best summary and explain why it is the best.	Locates or de instructional experiences w pupils to ide paragraph or

	Demonstrates own ability to handle the different reading skills. Can illustrate what one does when using each skill.
Provides a series of learning experiences designed to teach pupils each of the reading skills and to give them practice in using them.	Can explain, drawing upon research findings, the importance of teaching reading skills in social studies, progress which can be made with such a skills program, and ways of teaching each skill.
Provides feedback to pupils on their progress in learning reading skills. Reinforces their efforts to improve them.	Can explain the importance of feedback to the learning process. Can explain the use of reinforcement to effect behavioral change; identifies ways of reinforcing behavior.
Helps pupils establish purposes before they begin any reading assignment.	Can explain research findings on the importance of establishing a purpose before reading.
Provides some learning experiences to demonstrate the value of establishing a purpose before beginning reading.	Develops instructional materials and plans learning experiences to demonstrate the way in which establishing purposes for reading helps the reader.
Uses exercises on current events materials and on reading materials used in unit to teach pupils to pick out the main idea(s) in a paragraph or selection. At times asks pupils to summarize the main points in a reading selection; projects several summaries (without names) and asks pupils to pick out the best summary and explain why it is the best.	Identifies devices by which authors tend to emphasize their main ideas. Locates or develops exercises and other instructional materials and learning experiences which can be used to teach pupils to identify main ideas in a paragraph or reading selection.

	Uses other learning experiences to help pupils state main ideas from a reading selection in their own words. At times asks pupils to use some of the common writing devices to emphasize their main ideas in an essay or some other written work. Has pupils exchange written work and try to identify main ideas.	
3) Reads for details. a. Reads for details which support or contradict generalizations and main ideas or hypotheses. b. Reads to identify words and phrases intended to persuade.	Asks pupils how they will adjust their reading speed when reading for details. Asks pupils to identify clearly the main idea or hypotheses which they read for details.	Can explain rea reading speed t poses. Locates or deve learning experi learn to distin which support a ideas, to ident and to identify
c. Reads to identify assumptions.	Uses exercises which teach pupils to distinguish between facts which support and those which contradict a statement, to identify assumptions, and to detect persuasion devices.	
4) Reads to organize what is read. a. Relates details to main ideas. b. Identifies author's structure by outlining the material. c. Relates ideas acquired from a number of sources and reorganizes data into own structure for topic.	Gives pupils opportunities to learn the basic skills required in outlining material, including identifying major and subordinate ideas and differentiating between relevant and irrelevant data. At times asks them to pick out the best outline of a specific piece of written material and to explain why it is the best.	Identifies skil Develops an out understanding c major and subor relevant and i Given an outlin which the outli ordination or ordinate ideas are placed.

Uses other learning experiences to help pupils state main ideas from a reading selection in their own words.

At times asks pupils to use some of the common writing devices to emphasize their main ideas in an essay or some other written work. Has pupils exchange written work and try to identify main ideas.

Asks pupils how they will adjust their reading speed when reading for details.

Can explain reasons for adapting reading speed to different purposes.

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suade.

Asks pupils to identify clearly the main idea or hypotheses which they read for details.

Locates or develops exercises and other learning experiences to help pupils learn to distinguish between facts which support and do not support main ideas, to identify persuasion devices, and to identify assumptions.

ptions.

Uses exercises which teach pupils to distinguish between facts which support and those which contradict a statement, to identify assumptions, and to detect persuasion devices.

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Gives pupils opportunities to learn the basic skills required in outlining material, including identifying major and subordinate ideas and differentiating between relevant and irrelevant data. At times asks them to pick out the best outline of a specific piece of written material and to explain why it is the best.

Identifies skills involved in outlining.

Develops an outline which shows clear understanding of differences between major and subordinate ideas and between relevant and irrelevant data.

Given an outline, can identify ways in which the outline suffers from poor subordination or lack of relevance of subordinate ideas to ideas under which they are placed.

	Asks pupils to read more than one source on topics or problems which they are investigating.	Locates ing mate pupils o izing da sources.
	Provides opportunities for pupils to study topics which demand gathering data from a variety of sources. Reinforces pupils when they use a number of sources and develop their own organization for the topic.	Identifi investig some whi tively w sources
	Provides instructional materials and learning experiences which help pupils select an appropriate organization for a specific type of topic or purpose.	Identifi suitable types of poses.
5) Adjusts reading rate to purpose in reading, type of material read, own familiarity with subject on which reading, and own reading skills.	Demonstrates the importance of adjusting reading rate to different types of reading materials, to different purposes, to own familiarity with topic, and to own reading skills.	Can expl a person ing spee
	Teaches pupils to skim for different purposes (to locate information, identify main ideas, gain an overview of material.) Provides learning experiences in which skimming is useful to pupils in studying a particular topic related to the unit under study.	Identifi Can expl ent purp Develops learning to skim

Asks pupils to read more than one source on topics or problems which they are investigating.	Locates or develops a number of reading materials on the same topic so that pupils can have experience in organizing data acquired from different sources.
Provides opportunities for pupils to study topics which demand gathering data from a variety of sources. Reinforces pupils when they use a number of sources and develop their own organization for the topic.	Identifies interesting topics for investigation during a unit. Selects some which cannot be handled effectively without using a number of sources of information.
Provides instructional materials and learning experiences which help pupils select an appropriate organization for a specific type of topic or purpose.	Identifies kinds of organizations suitable for outlining different types of topics for different purposes.
Demonstrates the importance of adjusting reading rate to different types of reading materials, to different purposes, to own familiarity with topic, and to own reading skills.	Can explain factors which should lead a person to increase or decrease reading speed.
Teaches pupils to skim for different purposes (to locate information, identify main ideas, gain an overview of material.) Provides learning experiences in which skimming is useful to pupils in studying a particular topic related to the unit under study.	Identifies possible uses of skimming. Can explain ways of skimming for different purposes. Develops instructional materials and learning experiences to teach pupils to skim for different purposes.

6) Interprets specialized social studies vocabulary.	Asks pupils to develop a unit dictionary of important social studies terms.	Identifies needed to u
a. Uses context in which words are used to infer meaning. b. Analyzes structure of words and identifies prefixes and suffixes which help one infer the meaning. c. Makes a phonetic analysis of a word order to pronounce it to find out if it is in one's speaking vocabulary even though not yet in one's reading vocabulary.	Uses exercises and other learning experiences to teach pupils ways of inferring the meaning of words without looking them up in the dictionary. Demonstrates how one can analyze the structure of a word or use phonetic analysis to pronounce it. Helps pupils understand how doing so permits them to interpret written terms.	Can explain meaning of up in a dic
d. Uses dictionary to locate definitions of word; selects definitions appropriate to context in which word was used.	Before pupils start reading an assignment, writes key and difficult words on the chalkboard. Asks pupils to use desk dictionaries to locate definitions. Writes some of them on chalkboard and demonstrates how one can use the context in which the word was used to pick out the definition which applies to the reading. (If necessary, teaches pupils how to use words or parts of words at top of page to locate quickly the entry desired, how to use the guide to a particular dictionary to interpret entries, etc.) Encourages pupils to use dictionary by the use of reinforcement.	Given a rea social stud which are l pupils of a level, and Identifies use a dicti
7) Takes effective notes on reading. a. Outlines material from one source.	Illustrates good and poor notes for a selection which pupils have read. Focuses discussion on what makes each set good or poor.	Identifies Can explain in taking n

al stud-	Asks pupils to develop a unit dictionary of important social studies terms.	Identifies key social studies terms needed to understand a topic.
are and ffixes eaning. of a to find king yet in	Uses exercises and other learning experiences to teach pupils ways of inferring the meaning of words without looking them up in the dictionary. Demonstrates how one can analyze the structure of a word or use phonetic analysis to pronounce it. Helps pupils understand how doing so permits them to interpret written terms.	Can explain ways of inferring the meaning of a word without looking it up in a dictionary.
defi- efi- text in	Before pupils start reading an assignment, writes key and difficult words on the chalkboard. Asks pupils to use desk dictionaries to locate definitions. Writes some of them on chalkboard and demonstrates how one can use the context in which the word was used to pick out the definition which applies to the reading. (If necessary, teaches pupils how to use words or parts of words at top of page to locate quickly the entry desired, how to use the guide to a particular dictionary to interpret entries, etc.) Encourages pupils to use dictionary by the use of reinforcement.	Given a reading selection, identifies social studies terms and other words which are likely to be difficult for pupils of a certain age, reading level, and background. Identifies particular skills needed to use a dictionary effectively.
reading. source.	Illustrates good and poor notes for a selection which pupils have read. Focuses discussion on what makes each set good or poor.	Identifies criteria for taking notes. Can explain some of the common faults in taking notes.

b. Puts most notes in own words rather than taking down extensive quotations. c. Reads through a selection before deciding on notes to make.	Gives pupils criteria for taking notes and then checks notes at fairly frequent intervals, making comments to help pupils improve their note taking. See also page 30.	See also page
d. Uses note cards for greater flexibility in organizing data from several sources.	Demonstrates, perhaps through pantomine, a student using running notes rather than note cards when trying to write about a topic after using many sources of information. Then demonstrates use of note cards in organizing data prior to preparing any report.	Distinguishes which an outl on readings m in which note useful.
c. Reads and interprets maps, graphs, tables, and various types of charts. 1. Studies title and then looks first for big idea presented in a table. 2. Studies legend and then looks at details.	Encourages pupils to gather data presented in these forms. Helps them understand the usefulness of such materials in studying problems. For example, uses learning experiences, designed to illustrate the way in which a map helps them identify patterns which are almost impossible to identify from a long table of data. Or has them compare a graph and a table of data to see which presents trends or comparisons in such a way that they can be understood more quickly.	Locates or de ences and ins illustrate th graphs, table Reads and int himself/herse Identifies us materials for

words rather ive quota- on before ke.	Gives pupils criteria for taking notes and then checks notes at fairly frequent intervals, making comments to help pupils improve their note taking. See also page 30.	See also page 30.
ater ng data	Demonstrates, perhaps through pantomine, a student using running notes rather than note cards when trying to write about a topic after using many sources of information. Then demonstrates use of note cards in organizing data prior to preparing any report.	Distinguishes between situations in which an outline or running notes on readings may be useful and those in which note cards would be more useful.
ps, graphs, es of charts. looks ented in n looks	Encourages pupils to gather data presented in these forms. Helps them understand the usefulness of such materials in studying problems. For example, uses learning experiences, designed to illustrate the way in which a map helps them identify patterns which are almost impossible to identify from a long table of data. Or has them compare a graph and a table of data to see which presents trends or comparisons in such a way that they can be understood more quickly.	Locates or develops learning experiences and instructional materials to illustrate the usefulness of maps, graphs, tables, and charts. Reads and interprets such materials himself/herself. Identifies usefulness of particular materials for specific purposes.

	Uses form appropriate to age and ability level of pupils in class. Diagnoses present skills and builds upon them.	Identifies charts, and which ones difficult t different a Develops ex diagnose pu preting sue
	Encourages pupils to construct own forms and to translate data from one form to another (such as a table to a graph or map, or one type of graph to another.) Encourages them to translate data presented in paragraph form to graphs, charts, and tables. Uses instructional materials to help them identify type of graph most useful to present certain types of data.	Breaks skil tables, cha component s
3) Looks for misleading details such as graphs which do not begin at zero, the use of different size symbols on pictographs, maps designed to exagerate by comparing numbers to population of states and using only low or high population states in comparison, etc.	Uses instructional materials and exercises to teach pupils to identify misleading features of graphs, charts, maps. Uses materials related to current affairs, the unit topic, and advertising.	Identifies details use Locates or materials t misleading

	Uses form appropriate to age and ability level of pupils in class. Diagnoses present skills and builds upon them.	Identifies different types of graphs, charts, and tables and can explain which ones are easy and which more difficult to interpret for pupils of different age levels. Develops exercises or tests to diagnose pupils' skills in interpreting such materials.
	Encourages pupils to construct own forms and to translate data from one form to another (such as a table to a graph or map, or one type of graph to another.) Encourages them to translate data presented in paragraph form to graphs, charts, and tables. Uses instructional materials to help them identify type of graph most useful to present certain types of data.	Breaks skills of interpreting graphs, tables, charts, and maps down into component skills for easier teaching.
ls such in at size ps omparing tates rison,	Uses instructional materials and exercises to teach pupils to identify misleading features of graphs, charts, maps. Uses materials related to current affairs, the unit topic, and advertising.	Identifies common types of misleading details used in graphic materials. Locates or develops instructional materials to help pupils identify misleading details.

	Asks pupils to look for examples in current magazines, newspapers, in books they read, in TV ads. Reinforces pupils' behavior when they bring in or refer to such materials.	Can exp to effe ways of
4) Notes relationships and draws inferences.	Uses exercises designed to help pupils learn to draw inferences from data presented in tables, charts, graphs. Teaches them to interpolate, extrapolate, and to draw logical inferences which go beyond the data presented.	Can exp lation, Given g own abi polate, which g
		Can exp inferen izatio and (b)
		Locates skill i kinds.
5) Interprets map symbols in terms of map legend.	Uses visual materials to help pupils understand specific map symbols as well as the use of symbols to represent reality.	Can exp pupils and to sent re
	Asks pupils to develop a map using their own symbols and to prepare a legend explaining them.	

	Asks pupils to look for examples in current magazines, newspapers, in books they read, in TV ads. Reinforces pupils' behavior when they bring in or refer to such materials.	Can explain the use of reinforcement to effect behavioral change; identifies ways of reinforcing behavior.
raws	Uses exercises designed to help pupils learn to draw inferences from data presented in tables, charts, graphs. Teaches them to interpolate, extrapolate, and to draw logical inferences which go beyond the data presented.	Can explain the meaning of interpolation, extrapolation, and inference. Given graphs or tables, can demonstrate own ability to interpolate, extrapolate, and draw other inferences which go beyond the data shown. Can explain the difference between inferences and (a) singular generalizations which do not go beyond data, and (b) factual statements. Locates or develops exercises to teach skill in drawing inferences of various kinds.
terms	Uses visual materials to help pupils understand specific map symbols as well as the use of symbols to represent reality. Asks pupils to develop a map using their own symbols and to prepare a legend explaining them.	Can explain the importance of teaching pupils to visualize some map symbols and to understand that symbols represent reality.

	When teaching specific symbols, takes time to teach needed concepts behind the symbols.	Can expla comprehen symbols.
	Uses maps showing color symbols to show different things; asks pupils to interpret symbols and then helps them understand the importance of interpreting symbols in terms of the specific map legend.	Can expla the map symbols.
	Builds upon existing knowledge of map symbols and gradually introduces symbols of increasing abstraction and difficulty.	Locates c cises to knowledge symbols.
6) Uses different types of map scales to measure distances on map.	Introduces different ways of indicating distance on maps. Uses map scales suitable for maturity level of pupils, but after they have demonstrated ability to use one type, introduces another. Gives pupils many opportunities to use any type introduced and to translate one into another.	Demonstra and use Identifie usually levels o level of Develops learning the use

	When teaching specific symbols, takes time to teach needed concepts behind the symbols.	Can explain the importance of building comprehension of concepts behind symbols.
	Uses maps showing color symbols to show different things; asks pupils to interpret symbols and then helps them understand the importance of interpreting symbols in terms of the specific map legend.	Can explain the importance of using the map legend to interpret map symbols.
	Builds upon existing knowledge of map symbols and gradually introduces symbols of increasing abstraction and difficulty.	Locates or develops diagnostic exercises to identify level of pupils' knowledge of different types of symbols.
cales	Introduces different ways of indicating distance on maps. Uses map scales suitable for maturity level of pupils, but after they have demonstrated ability to use one type, introduces another. Gives pupils many opportunities to use any type introduced and to translate one into another.	Demonstrates own ability to interpret and use different types of map scales. Identifies types of map scales usually taught at different grade levels or differences in the difficulty level of different types of scales. Develops instructional materials and learning experiences designed to teach the use of different map scales.

7) Identifies limitations and usefulness of different types of map projections. Can detect different types of distortion on a map by comparing map grid with grid on globe.	Provides opportunities for pupils to compare size and shape of different land bodies on different map projections. Asks pupils to compare distances between several places on different projections. Then asks pupils to generalize about features of different projections. Asks pupils to compare the grid on a map projection with the grid on a globe. Helps them identify type of distortion found on projection by way in which grids differ.	Can explai limitations projections identifying by comparin grid on the Locates or materials designed to distort rea Can identi grid. Uses types of di projections
8) Draws inferences from a comparison of different map patterns of the same area.	Provides many opportunities for pupils to compare different map patterns of same area, to note relationships between them, and to draw inferences or to hypothesize about other features of the area, using previously-learned generalizations from geography.	Demonstrate inferences ent map pat previously- izations to features o
d. Gains information by listening, as indicated by the following behaviors.	Works to develop pupils' skills in oral presentations of various sorts so that they will find such presentations more interesting and will listen more carefully. Uses oral presentations to go beyond the data or topics covered in any common reading material so that pupils will understand the usefulness of the material presented.	Identifies different Identifies in evaluati develops u paration. Identifies ways of he needed in different

use- of map ffer- a map grid	Provides opportunities for pupils to compare size and shape of different land bodies on different map projections. Asks pupils to compare distances between several places on different projections. Then asks pupils to generalize about features of different projections. Asks pupils to compare the grid on a map projection with the grid on a globe. Helps them identify type of distortion found on projection by way in which grids differ.	Can explain different advantages and limitations of common types of map projections. Can explain ways of identifying distortions on any map by comparing the map grid with the grid on the globe. Locates or develops instructional materials and learning experiences designed to teach ways in which maps distort reality in different ways. Can identify major features of global grid. Uses this knowledge to identify types of distortion on different map projections.
n- ıtterns	Provides many opportunities for pupils to compare different map patterns of same area, to note relationships between them, and to draw inferences or to hypothesize about other features of the area, using previously-learned generalizations from geography.	Demonstrates his own ability to draw inferences from a comparison of different map patterns and to draw on previously-learned geographic generalizations to hypothesize about other features of the area.
ning, ing	Works to develop pupils' skills in oral presentations of various sorts so that they will find such presentations more interesting and will listen more carefully. Uses oral presentations to go beyond the data or topics covered in any common reading material so that pupils will understand the usefulness of the material presented.	Identifies skills involved in making different types of oral presentations. Identifies criteria which might be used in evaluating such presentations; develops useful guides to their preparation. Identifies and can explain different ways of helping pupils learn skills needed in preparing and presenting different types of oral presentations.

	Uses diagnostic devices and results of research findings on listening to help pupils understand the importance of listening skills and the fact that most people can improve them greatly.	Identifies diagn in measuring lis Develops some in devices of own. Identifies sourc ings on listenin
	At times gives questions or directions orally rather than in writing; uses tests of listening afterwards, at least when beginning attempts to help pupils listen more carefully.	Identifies and c the ways of teac more carefully.
	Encourages pupils to gather data and important ideas for projects and the unit topic from recorded materials and from speeches.	
	Uses tape recorder or video-tape recorder to permit pupils to hear themselves, to analyze their own discussions and to help them identify points which they missed from such discussions or problems which arise in discussions when pupils do not listen to each other.	
1) Listens for main ideas in structured speeches (of either the expository or persuasive type), of structured discussions, and of unstructured speeches and discussions.	Uses recordings of speeches or oral reports to help pupils identify things which speakers do to emphasize their main points. Clarifies differences in expository and persuasive speeches and ways in which to identify major points in each.	Can explain the the organizatio persuasive spee the common parts ways of using a parts to help o ideas.

Uses diagnostic devices and results of research findings on listening to help pupils understand the importance of listening skills and the fact that most people can improve them greatly.

Identifies diagnostic devices to use in measuring listening skills. Develops some informal diagnostic devices of own.

Identifies sources of research findings on listening skills.

At times gives questions or directions orally rather than in writing; uses tests of listening afterwards, at least when beginning attempts to help pupils listen more carefully.

Identifies and can explain some of the ways of teaching pupils to listen more carefully.

Encourages pupils to gather data and important ideas for projects and the unit topic from recorded materials and from speeches.

Uses tape recorder or video-tape recorder to permit pupils to hear themselves, to analyze their own discussions and to help them identify points which they missed from such discussions or problems which arise in discussions when pupils do not listen to each other.

Uses recordings of speeches or oral reports to help pupils identify things which speakers do to emphasize their main points. Clarifies differences in expository and persuasive speeches and ways in which to identify major points in each.

Can explain the differences between the organization of expository and persuasive speeches and can identify the common parts of each. Can explain ways of using a knowledge of these parts to help one listen for main ideas.

	Uses recordings of structured discussions (large class discussions, small group presentations) to illustrate ways of identifying major points.	Identifie leader st introduce summarize ences.
	Uses recordings to illustrate the differences between structured and unstructured speeches and discussions. Identifies ways of adjusting listening to identify main points in unstructured presentations.	Identifie structure ways of h for main
2) Adjusts note-taking to type of oral presentation. Takes effective notes.	Uses instructional materials, tape recordings and class discussions to teach pupils how to take notes on different types of oral presentations. Helps them identify quickly whether or not such presentations will be organized or unorganized, so that they can adjust their note-taking to the type used.	Identifie taking no oral disc unstructu for prefe
		Locates o materials pupils ho types of
	Provides frequent opportunities for taking notes on oral presentations; checks notes frequently at first and then not quite so frequently; makes comments on notes to suggest ways of improving them.	Can expla back to t
	Evaluates note-taking as part of evaluation procedures, to indicate importance placed on skill.	Can expla evaluatin inference teacher's evaluatio

	Uses recordings of structured discussions (large class discussions, small group presentations) to illustrate ways of identifying major points.	Identifies ways in which a discussion leader structures a discussion to introduce major questions and to summarize major points or major differences.
	Uses recordings to illustrate the differences between structured and unstructured speeches and discussions. Identifies ways of adjusting listening to identify main points in unstructured presentations.	Identifies early indications of unstructured presentation. Identifies ways of helping pupils learn to listen for main ideas in such presentations.
g to type of Takes effect-	Uses instructional materials, tape recordings and class discussions to teach pupils how to take notes on different types of oral presentations. Helps them identify quickly whether or not such presentations will be organized or unorganized, so that they can adjust their note-taking to the type used.	Identifies and can explain ways of taking notes on different types of oral discussions, structured and unstructured. Can explain reasons for preferring one system. Locates or develops instructional materials which can be used to teach pupils how to take notes on different types of oral presentations.
	Provides frequent opportunities for taking notes on oral presentations; checks notes frequently at first and then not quite so frequently; makes comments on notes to suggest ways of improving them.	Can explain the importance of feedback to the instructional process.
	Evaluates note-taking as part of evaluation procedures, to indicate importance placed on skill.	Can explain the importance of evaluating for goals because of the inferences which pupils make about a teacher's real goals on the basis of evaluation devices used.

e. Gains information by studying pictures, films, filmstrips, cartoons, realia, and things around one.	Uses visual materials as well as reading materials. Emphasizes importance of them for learning; does not just use them to entertain.	Demonstr types of
		Identifi material useful m
	Teaches pupils how to view and observe more carefully. (e.g. by examining details and drawing inferences from them, by identifying symbols and other devices used to present a point of view in a cartoon, etc.) Asks them to draw inferences and hypothesize from data.	Identifi asked to and draw cartoon,
	Uses materials which are suited to the interests and maturity level of pupils as well as to the unit topic. Uses materials appropriate for particular purpose (e.g. still pictures of some sort for careful viewing and studying of details; movies for studying processes or people's feelings, etc.)	Identifi selectin visual m
		Identifi each typ
	Provides some materials and study guides on their use for individual viewing, either as a means of gathering information for individual and small group projects or as a means of gathering data which all will study and discuss.	Prepares of some

Uses visual materials as well as reading materials. Emphasizes importance of them for learning; does not just use them to entertain.	Demonstrates ability to use various types of audio-visual equipment.
	Identifies sources of audio-visual materials. Locates and prepares useful materials.
Teaches pupils how to view and observe more carefully. (e.g. by examining details and drawing inferences from them, by identifying symbols and other devices used to present a point of view in a cartoon, etc.) Asks them to draw inferences and hypothesize from data.	Identifies questions which might be asked to help pupils examine details and draw inferences from a picture, cartoon, artifact, etc.
Uses materials which are suited to the interests and maturity level of pupils as well as to the unit topic. Uses materials appropriate for particular purpose (e.g. still pictures of some sort for careful viewing and studying of details; movies for studying processes or people's feelings, etc.)	Identifies criteria to use in selecting different types of audio-visual materials.
	Identifies appropriate purposes for each type of audio-visual material.
Provides some materials and study guides on their use for individual viewing, either as a means of gathering information for individual and small group projects or as a means of gathering data which all will study and discuss.	Prepares guides for individual study of some materials.

Prepares pupils for materials to be shown (perhaps by identifying questions, purpose, etc.); uses appropriate techniques for helping pupils examine materials carefully rather than telling them too much about the material; uses appropriate follow-up techniques.

Identifies general rules for introducing, using, and following-up on audio-visual materials. Can explain ways of helping pupils inquire as they examine materials, rather than telling them too much.

Arranges or has pupils arrange picture or realia displays and incorporates them in the ongoing work of the class.

Encourages pupils to use visual materials when presenting individual and small group projects.

Encourages pupils to compare visual and verbal sources of information and to draw inferences from them or raise questions about them. Encourages them to examine visual materials as critically as they would any source of information.

Provides opportunities for pupils to study the community in which they live, as well as specific resources in the community such as museums, etc. Helps pupils develop observation schedules and other devices for making accurate observations and recording them. (See following page.)

Can explain the usefulness of drawing upon community resources in a study of unit topics. Can explain the importance of teaching pupils techniques for careful observation of what they see and for recording these observations. Identifies some of the techniques which they might use.

f. Makes accurate observations by using appropriate techniques for the purpose. 1. Uses scales and indices. 2. Uses a system for taking notes. 3. Uses questionnaires with questions appropriate for purpose and stated clearly without being leading or biased. 4. Uses simple sampling techniques to increase the usefulness of any data acquired through interviews or questionnaires. Uses some system for ensuring an unbiased sample. 5. Uses content analysis techniques. 6. Uses participant-observor techniques.	Provides opportunities for pupils to use observation techniques appropriate to their maturity level and abilities. Makes provision for their use in the context of a unit in order to give purpose to their use. Provides instructional materials and learning experiences to teach pupils to use the different techniques and to identify inadequacies or limitations of the ways in which they use them. Asks pupils to examine the strengths and limitations of techniques used in some social science research related to the unit topic. Asks questions designed to help pupils limit their generalizations from their own studies in terms of the sample used and the techniques used in the study.	Identi used t and un explai demons Locate materi experi techni for us Identi used i studen social
g. Designs and uses simple experiments where these are possible and useful for purpose.	Has pupils analyze experiments conducted by social scientists to identify ways of controlling variables, etc. Provides opportunities for pupils to encounter experiments in their classroom and to find out how experiments are conducted in the social sciences. Conducts experiments or has some pupils conduct experiments related to ongoing work of class.	Identi in set upon e scienc Identi which in the Develo experi the cl

ns by ues for s. ng notes. th for arly or biased. echniques ness of ough naires. ensuring techniques. rvor tech-	Provides opportunities for pupils to use observation techniques appropriate to their maturity level and abilities. Makes provision for their use in the context of a unit in order to give purpose to their use.	Identifies techniques which can be used to help people make accurate and unbiased observations. Can explain the use of each. Can demonstrate own ability to use each.
	Provides instructional materials and learning experiences to teach pupils to use the different techniques and to identify inadequacies or limitations of the ways in which they use them.	Locates and develops instructional materials and plans for learning experiences to teach pupils the techniques and to provide opportunities for using them.
	Asks pupils to examine the strengths and limitations of techniques used in some social science research related to the unit topic.	Identifies inadequacies in techniques used in specific studies, whether by students, social scientists or pseudo social scientists.
	Asks questions designed to help pupils limit their generalizations from their own studies in terms of the sample used and the techniques used in the study.	
experiments and useful	Has pupils analyze experiments conducted by social scientists to identify ways of controlling variables, etc.	Identifies essential rules to follow in setting up research designs based upon experimentation in the social sciences.
	Provides opportunities for pupils to encounter experiments in their classroom and to find out how experiments are conducted in the social sciences. Conducts experiments or has some pupils conduct experiments related to ongoing work of class.	Identifies social science experiments which might be used for analysis and/or in the classroom to serve as models. Develops own design for several experiments which might be used in the class.

Evaluates information and sources of information as indicated by the following behaviors:

a. Distinguishes between relevant and irrelevant behaviors.
b. Assesses the accuracy of information by comparing it to known information and/or other sources, by assessing the competency and bias of authors or source, by identifying and examining assumptions, and by determining the difficulty of proving statements made.
c. Checks on the completeness of information and is wary of generalizations based on insufficient evidence.
    1. Rejects assumption of cause-effect relationship in correlations or post hoc arguments.
    2. Identifies fallacy of whole-part argument.
    3. Identifies card stacking, use of biased years in comparisons unrepresentative samples.
    4. Looks for other possible causes or data than those mentioned in source.

Provides frequent opportunities for pupils to learn skills and use them. Builds upon what pupils have learned earlier by teaching refinement of such skills and adding new ones.

Uses content, instructional materials, and learning experiences designed to emphasize the importance of thinking critically about social studies topics and learning critical thinking skills.

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sources of y the relevant rs. of infor- to known er sources, tency and urce, by ning termining ving state- ness of y of on insuf- of cause- in t hoc of whole-	Provides frequent opportunities for pupils to learn skills and use them. Builds upon what pupils have learned earlier by teaching refinement of such skills and adding new ones.	Identifies critical thinking skills as major objectives for social studies. Can explain the importance of teaching for critical thinking if pupils are to learn to think critically; uses research evidence in support of explanation. Can explain the importance of developing a program which provides for continuity and sequence in the development of skills; can explain the relationship of such a program to transfer of learning. Works with other teachers on a staff to develop a skills program providing for continuity and sequence. Identifies ways of diagnosing levels of skill development among pupils. Locates and develops diagnostic devices.
acking, use comparisons amples. ssible causes mentioned in	Uses content, instructional materials, and learning experiences designed to emphasize the importance of thinking critically about social studies topics and learning critical thinking skills.	Locates or develops instructional materials and learning experiences which demonstrate the importance to pupils and to society of critical thinking skills.

d. Detects inconsistencies in material. e. Detects logical errors, unwarranted assumptions; questions unsupported generalizations.	Teaches skills in context of topics studied so that pupils will find them useful.	Can explain skills in t or problem gating.
	Makes sure that all points of view ae discussed when handling controversial issues. Uses instructional materials representing varied viewpoints.	Develops cr controversi
	Models the behaviors when are expected of students, including a healthy skepticism of sources until they have been evaluated, a willingness to examine one's own thinking processes, and the ability to use specific skills involved in evaluating sources and information.	Can explain behavior to Demonstrate information
	Creates a warm and open classroom atmosphere in which critical thinking is promoted but in a depersonalized way so that pupils examine and criticize ideas without criticizing pupils who propose them.	Identifies those hinde warm and op explain the climate for critical th
	Reinforces pupils who ask questions about or challenge information or sources of information.	Can explain forcement i change; ide behavior.
	Uses content, instructional materials (including exercises), and learning experiences designed to help pupils develop specific skills of evaluating information and sources of information. Uses materials appropriate to age level and ability level and to pupils' interests.	Locates and materials a which can b skills need of informat Selects ins learning ex particular

rial. ated ted Teaches skills in context of topics studied so that pupils will find them useful.	Can explain the reasons for teaching skills in the context of a topic or problem which pupils are investigating.
Makes sure that all points of view ae discussed when handling controversial issues. Uses instructional materials representing varied viewpoints.	Develops criteria to use when handling controversial issues and materials.
Models the behaviors when are expected of students, including a healthy skepticism of sources until they have been evaluated, a willingness to examine one's own thinking processes, and the ability to use specific skills involved in evaluating sources and information.	Can explain the importance of modeling behavior to effect behavioral change. Demonstrates own skill in evaluating information and sources of information.
Creates a warm and open classroom atmosphere in which critical thinking is promoted but in a depersonalized way so that pupils examine and criticize ideas without criticizing pupils who propose them.	Identifies the factors promoting and those hindering the development of a warm and open classroom climate. Can explain the importance of such a climate for the development of critical thinking skills.
Reinforces pupils who ask questions about or challenge information or sources of information.	Can explain the importance of reinforcement in effecting behavioral change; identifies ways of reinforcing behavior.
Uses content, instructional materials (including exercises), and learning experiences designed to help pupils develop specific skills of evaluating information and sources of information. Uses materials appropriate to age level and ability level and to pupils' interests.	Locates and develops instructional materials and learning experiences which can be used to teach specific skills needed in evaluating sources of information. Selects instructional materials and learning experiences in terms of a particular group of students.

	Uses some form of an inquiry teaching strategy in teaching evaluation skills.	Can explain inquiry teac these skills conclusions making expla
	Uses questions designed to probe statements made by pupils and to help them evaluate information and sources of information.	Identifies t can be used information mation and t kinds of que asked as one
	Evaluates pupil growth in developing the various skills needed for evaluating information and sources of information. Provides pupils with frequent feedback about their results.	Can explain back to the explain evaluating a of inferenc a teacher's kinds of eva
5. Analyzes and organizes information which has been gathered; draws logical conclusions.	Provides opportunities for pupils to learn and use these skills. Provides direct teaching of the skills within one unit and then provides for further opportunities to use them in later units, with review as necessary.	Identifies s and organizi logical conc Demonstrates skills.
	Uses questions designed to elicit thought processes involved in handling this general skill.	Identifies l taxonomy of processes. Identifies q to elicit di

Uses some form of an inquiry teaching strategy in teaching evaluation skills.	Can explain the reasons for using an inquiry teaching stretegy to teach these skills; draws upon general conclusions of research studies in making explanation.
Uses questions designed to probe statements made by pupils and to help them evaluate information and sources of information.	Identifies types of questions which can be used to help pupils evaluate information and sources of information and to identify the specific kinds of questions which need to be asked as one examines sources.
Evaluates pupil growth in developing the various skills needed for evaluating information and sources of information. Provides pupils with frequent feedback about their results.	Can explain the importance of feedback to the learning process. Can also explain the importance of evaluating all types of goals because of inferences which pupils make about a teacher's real goals in terms of the kinds of evaluation devices used.
Provides opportunities for pupils to learn and use these skills. Provides direct teaching of the skills within one unit and then provides for further opportunities to use them in later units, with review as necessary.	Identifies skills involved in analyzing and organizing information and drawing logical conclusions. Demonstrates the ability to use these skills.
Uses questions designed to elicit thought processes involved in handling this general skill.	Identifies levels of thought on some taxonomy of knowledge or thought processes. Identifies questions which can be used to elicit different thought processes.

a. Differentiates and classifies data; conceptualizes.	Provides opportunities for pupils to conceptualize for themselves. Uses a discussion strategy designed to teach pupils to conceptualize.	Identif involve steps t strateg concept
	Provides other learning experiences to teach pupils to identify situations when public categories or concepts are most useful and when it is helpful to develop their own categories.	Can exp public explain new typ purpose
b. Applies previously-learned concepts and generalizations to the analysis of data. At times does so to identify new hypotheses which might be tested even at this stage of problem-solving.	Provides experiences to teach pupils to apply previously-learned concepts to new data and to learn the value of using such concepts and generalizations about them to analyze new data.	Locates ences a teach p learned to new
	Encourages and reinforces pupils' efforts to apply previously-learned ideas to new data.	Can exp in effe identif behavio
c. Organizes data around some logical pattern to fit topic. (e.g. around sub-problems when identifying problems; around topics rather than chronology when examining causes, under different alternatives when examining courses of action). Does so before attempting to test hypotheses.	Helps pupils analyze different ways of organizing data in terms of purpose and type of problem. Gives them opportunities to organize data for purposes of a more careful delineation of the problem, for purposes of testing hypotheses about causes, and for purposes of testing hypotheses and reaching decisions about alternative courses of action.	Identif zation specifi Identif oping a rules a vancy.

Provides opportunities for pupils to conceptualize for themselves. Uses a discussion strategy designed to teach pupils to conceptualize.	Identifies the thought processes involved in conceptualizing and the steps to follow in some discussion strategy aimed at helping pupils conceptualize on their own.
Provides other learning experiences to teach pupils to identify situations when public categories or concepts are most useful and when it is helpful to develop their own categories.	Can explain the usefulness of knowing public terms for concepts. Can also explain the usefulness of developing new types of categories for particular purposes.
Provides experiences to teach pupils to apply previously-learned concepts to new data and to learn the value of using such concepts and generalizations about them to analyze new data.	Locates and develops learning experiences and instructional materials to teach pupils to apply previously-learned concepts and generalizations to new data.
Encourages and reinforces pupils' efforts to apply previously-learned ideas to new data.	Can explain the use of reinforcement in effecting behavioral change; identifies ways of reinforcing behavior.
Helps pupils analyze different ways of organizing data in terms of purpose and type of problem. Gives them opportunities to organize data for purposes of a more careful delineation of the problem, for purposes of testing hypotheses about causes, and for purposes of testing hypotheses and reaching decisions about alternative courses of action.	Identifies different types of organization which pupils might use for specific purposes. Identifies rules to follow in developing any type of outline, including rules about subordination and relevancy.